Exhibit "F" to
Amended Verified Petition

MINED LAND–USE PLAN

For The

KINGS HILL ROAD SHALE MINE

TOWN OF MONTGOMERY

ORANGE COUNTY, NEW YORK

Prepared For

MEHLON TRUCKING, INC.

WALLKILL, NEW YORK

JULY 1988

WEHRAN ENGINEERING
CONSULTING ENGINEERS

MINED LAND-USE PLAN
FOR THE
KINGS HILL ROAD SHALE MINE
TOWN OF MONTGOMERY
ORANGE COUNTY, NEW YORK

Prepared for

MEHLON TRUCKING INCORPORATED
Wallkill, New York 12533

Prepared by

WEHRAN ENGINEERING, P. C.
666 East Main Street
Middletown, New York 10940

WE Project No. 07534 EP

July 1988

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1.0 INTRODUCTION

Mehlon Trucking Incorporated is applying for a mining permit which proposes use of 18.1 acres as a shale mining operation. The site is located on the north side of Kings Hill Road in the Town of Montgomery, Orange County, New York. The area to be permitted is contained within a 159.9-acre parcel owned by the applicant and bordering the Town of Newburgh, Orange County to the east and north, and the Town of Shawangunk, Ulster County to the north. The site is located on the Walden, New York, USGS 7.5-minute topographic quadrangle. The affected acreage includes areas for mining, shale stockpiling, equipment storage, and topsoil stockpiling. An existing 2,100 linear foot access road provides access to the proposed mining area from Kings Hill Road.

This mine site will produce approximately 820,000 cubic yards (in place) of graded, crushed shale. All of the material excavated from the mine will be transported off site and sold.

This Mined Land-Use Plan and the accompanying permit application have been prepared to meet the requirements necessary to obtain a mining permit from the New York State Department of Environmental Conservation (NYSDEC). The purpose of the plan is to provide a description of mining and reclamation operations to be used at the site. This plan is also being proposed to comply with local requirements for mining operations to be specified by the Town of Montgomery Planning Board.

2.0 MINING PLAN

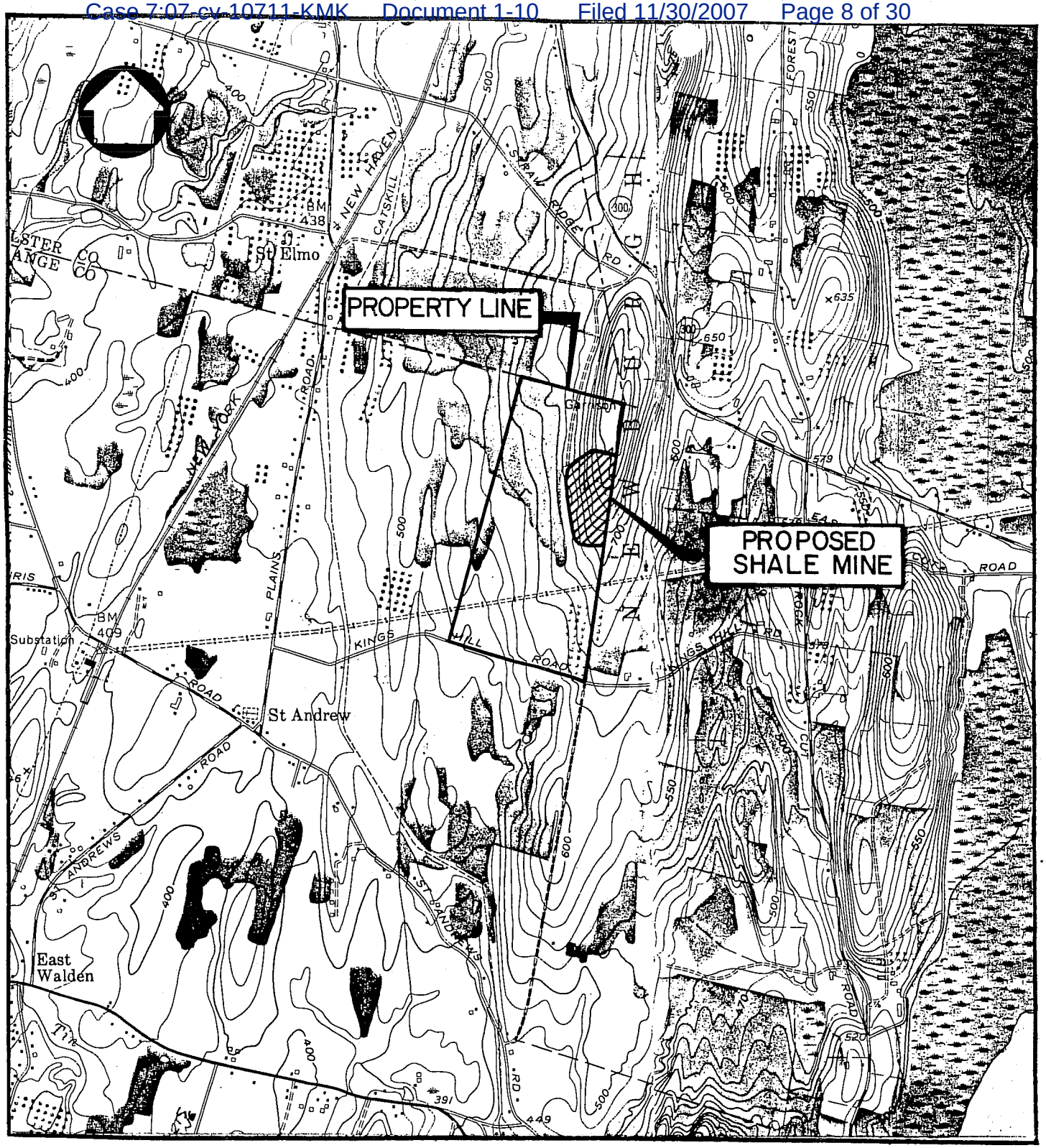
2.1 EXISTING LAND-USE DESCRIPTION

The proposed Mehlon Trucking Incorporated shale mine is located in northeastern Orange County in the Town of Montgomery (Figure 1). The mine is located in an area which will ultimately be developed for residential use (see Section 3.0). The proposed mine will yield material which will be sold for use off site.

The existing land use within the proposed excavation area is comprised of areas of heavy woodland, brush, and an inactive mine. The wooded area, which covers about 60 percent of the proposed excavation area is an unmanaged, deciduous forest with small shrubs and bushes. The remaining area contains an inactive shale mine which covers approximately 40 percent of the proposed excavation area. This mine has been in existence between 20 to 30 years and was last permitted by the NYSDEC in 1983. The permit expired in 1986 and the mine was never reclaimed. The mined area is devoid of vegetation and contains material stockpiles and exposed mining cuts. This existing disturbance will be reclaimed as part of the proposed mining and reclamation plan. The various land-uses described above are shown on the attached Engineering Plans (Sheet 1 of 5).

The site is located within a one and two-family residential agricultural (RA-1) zone as defined by the Town of Montgomery. The land use adjacent to the proposed mine site is predominantly forest with some idle farmland. The nearest residences to the proposed mine are approximately 500 feet to the east in the Town of Newburgh and are buffered from the site by the crest of the shale ridge. As an additional buffer zone between the adjacent landowners and the mine site, a boundary of woodland will be preserved around the excavation area to act as a visual screen. This Mined Land-Use Plan has been developed to conform with the local regulations and zoning laws, as well as the State mining regulations.

The major soil groups present at the site are Bath-Nassau shaley silt loam and Rock Outcrop-Nassau complex shaley silt loam (Figure 2). These soils consist of a surface layer of dark grayish brown shaley silt loam and a



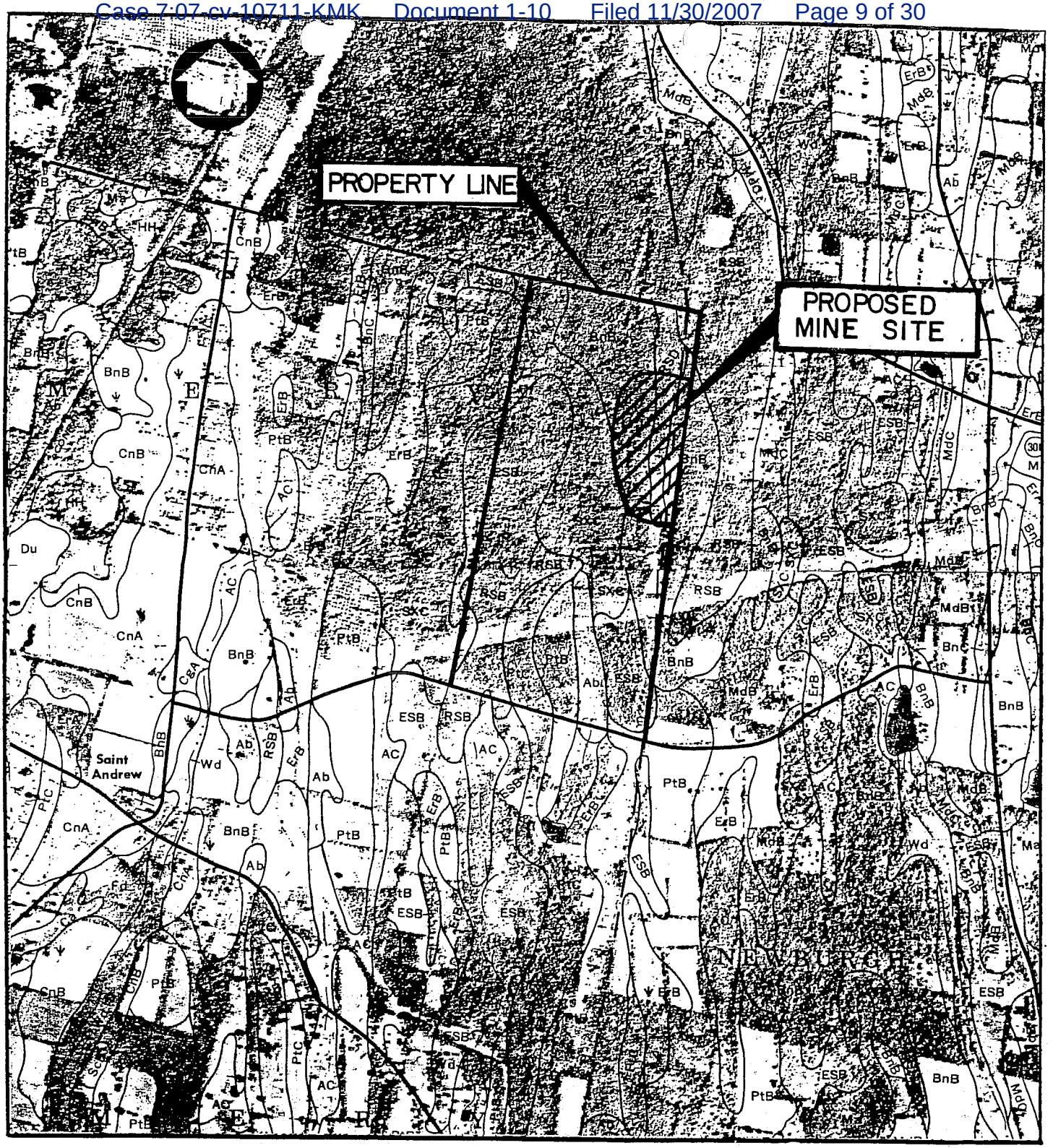
TOPOGRAPHY TAKEN FROM
WALDEN & NEWBURGH, N.Y., 1957
PHOTOREVISED, 1981
U.S.G.S. QUADRANGLE MAP.
7.5 MIN. SERIES

SCALE: 1" = 2000'

QUADRANGLE LOCATION

FIGURE 1

SITE LOCATION MAP



SOURCE:
SOIL MAP ORANGE COUNTY, N.Y.
MAP COMPILED BY CARTOGRAPHIC SECTION, DIVISION OF SOIL SURVEY, BPISAE , FROM U.S. GEOLOGICAL SURVEY QUADRANGLES AND ARIEL PHOTOGRAPHS.

SCALE: 1" = 15,840'

FIGURE 2

SOILS MAP

subsoil of yellowish brown very shaley silt loam. Hard, black tilted shale is at a depth of 10 to 20 inches. The rock outcrop protrudes as exposed ledges and angular beds of tilted and folded shale bedrock.

Based on an assessment of published soils and geologic information and a visual inspection of the existing quarry, it is apparent that shale is present at the proposed mine beyond the proposed limits of excavation. Based on the rock outcrops in the soil and the nature of the topography, it is assumed that a ridge of shale extends northerly along the Town of Montgomery - Town of Newburgh border and into the Town of Shawangunk.

2.2 MINING OPERATION

The proposed mining operation will be a surface consolidated mine which will remove shale by ripping, and drilling and blasting. Processing activities to be utilized at the site consist of dry screening of the excavated shale, with primary and/or secondary crushing of larger stone, depending on the proposed use of the material. The excavated material will be transported off site for use at construction sites in northern Orange and southern Ulster Counties.

Mining is tentatively scheduled to begin in the Fall of 1988, and will continue for approximately 15 years, or until all mineable material is excavated to the proposed final grade. Mining will be accomplished in five, three-year phases. When all mining has been concluded, final reclamation of the site will be completed within six months.

2.3 MINING METHOD

2.3.1 Sequence of Operations

It is proposed that the mining operation be conducted in five phases as shown on the Engineering Plans (Sheet 2 of 5), with the phase numbers reflecting the sequence of operation through the mine site. Generally, mining activities will begin from the highest elevation in a phase area and progress downward. This prevents large mining cuts from being left unreclaimed for extended periods of time. Phase I will be undertaken first,

however, to allow for reclamation of the existing mine faces in a timely fashion. The phase boundaries have been located based upon the expected life of the mine and on volume of material to be excavated during each triennial permit period. Each phase will provide approximately 250,000 cubic yards of excavated shale over a period of three years.

Reclamation (see Section 3.0), will take place concurrently with mining activities. Typically, as mining progresses from one phase to the next, reclamation work will begin on the first phase. It is anticipated, that when mining is completed on the second phase, the previous phase area will have been completely reclaimed including grading, topsoil redistribution, and seeding. The same steps will occur in subsequent phases so that reclamation will begin in the recently completed phase as mining moves into the next phase. Final reclamation will begin once all material has been removed from the final phase. The total mined area will be reclaimed within six months after the cessation of mining. An exception to this progression through the site will be those areas of Phase I which will be utilized throughout the life of the mine. Specifically excluded are haulageways, the erosion and sediment control measures, the mine operation area, the soil stockpile, and the shale stockpile. Reclamation of these areas will be complete within six months after the cessation of mining.

The maximum height of any vertical face will be 30 feet, as specified by NYSDEC. A vertical face height of ten feet, however, will be more typical of this proposed mining activity. Once an active mine face reaches this height, reclamation will begin prior to continuation of mining.

The following general mining sequence will be used at this site:

- Prior to the removal of any material, sediment barriers and stormwater diversions with stabilized outlets will be installed.
- Within six months following the commencement of mining operations, the existing access road will be upgraded; the entrance culvert will be replaced and enlarged, bituminous pavement will be applied at the entrance to Kings Hill Road, and the existing entrance gate will be replaced (Sheet 5 of 5). Three

additional stormwater culverts will be installed as shown on the Engineering Plans for the further control of stormwater.

- Mining will begin at the center of the site along the northern edge of Phase I, and will then progress from the northeastern corner (Phase II) toward the southeast (Phase V) until all material has been extracted down to the proposed final grade.
- Prior to the mining cut, stormwater diversions will be installed upslope from the area to be mined and sediment barriers will be installed downslope. Structures will be installed as shown in the Engineering Plans.
- Following stabilization of the erosion control measures, the ground surface will be stripped of all remaining vegetation. This material will be shredded and used as mulch or hauled away and disposed of in an appropriate manner.
- All overlying topsoil will be removed and placed in the topsoil storage area. The topsoil will be protected from erosion by seeding the stockpile with temporary vegetative cover which will be established as soon as possible after stockpiling. Sediment control barriers will be installed as shown on Sheet 2 of 5.
- Once all topsoil is removed, the shale will be excavated by either ripping or blasting. The choice of method will depend on the desired hourly rate of production and the unit production costs. Fragmented material will be placed in a temporary stockpile within the permit area. The material will then be processed, loaded into trucks, and taken off site.
- Any processing required will be performed at the mine operation area before the shale is transported. Dry screening, with primary and/or secondary crushing, are being considered at this site.
- Material will be transported over existing haulageways within the permit area which intersect with the access road.
- As mining progresses, spoil material will be hauled back to previously mined areas and used for backfilling. This will help to maintain concurrent reclamation.

- The areas being reclaimed will be backfilled to achieve a maximum outslope of three horizontal to one vertical (18 degrees). All areas will be backfilled such that drainage will be controlled, erosion minimized, and a stable backfill configuration achieved.
- After final grading is complete, topsoil, or material suitable for sustaining growth, will be redistributed and prepared for seeding. All efforts will be made to utilize topsoil from areas actively being cleared for mining thereby minimizing the amount of topsoil stockpiled at the site.
- The graded soil will be tested to determine lime and fertilizer requirements. Appropriate treatment will be applied to accomplish revegetation. The area will then be seeded and mulched in accordance with the revegetation plan provided in the Mined Land-Use Plan.

2.3.2 Excavation and Grading

All excavations and stockpiled topsoil material will be graded to provide appropriate slope control. The material placed in the topsoil storage area will be graded to a maximum outslope of two horizontal to one vertical (26 degrees).

Drilling benches will be established above the shale area to be removed. A specific drilling pattern will be used to help facilitate blasting. The holes will be loaded with explosives and the rock will be blasted loose. The excavated rock faces will be terraced back in a series of small benches (Sheet 4 of 5). The benches will have vertical slopes on the highwalls while the rock is being removed. The benches will be eliminated by grading material into them when the area is reclaimed. All excavation at this site will be at least 500 feet from any occupied dwellings, and no portion of the permit area, including the access road, will be located closer than 50 feet to the surrounding property line.

2.3.3 Blasting

General

All blasting conducted at this site will comply with applicable local, State, and Federal regulations in the use of explosives. Blasting will be limited to two days per month, one shot per day weekdays, with a maximum weight of explosives equal to 600 pounds.

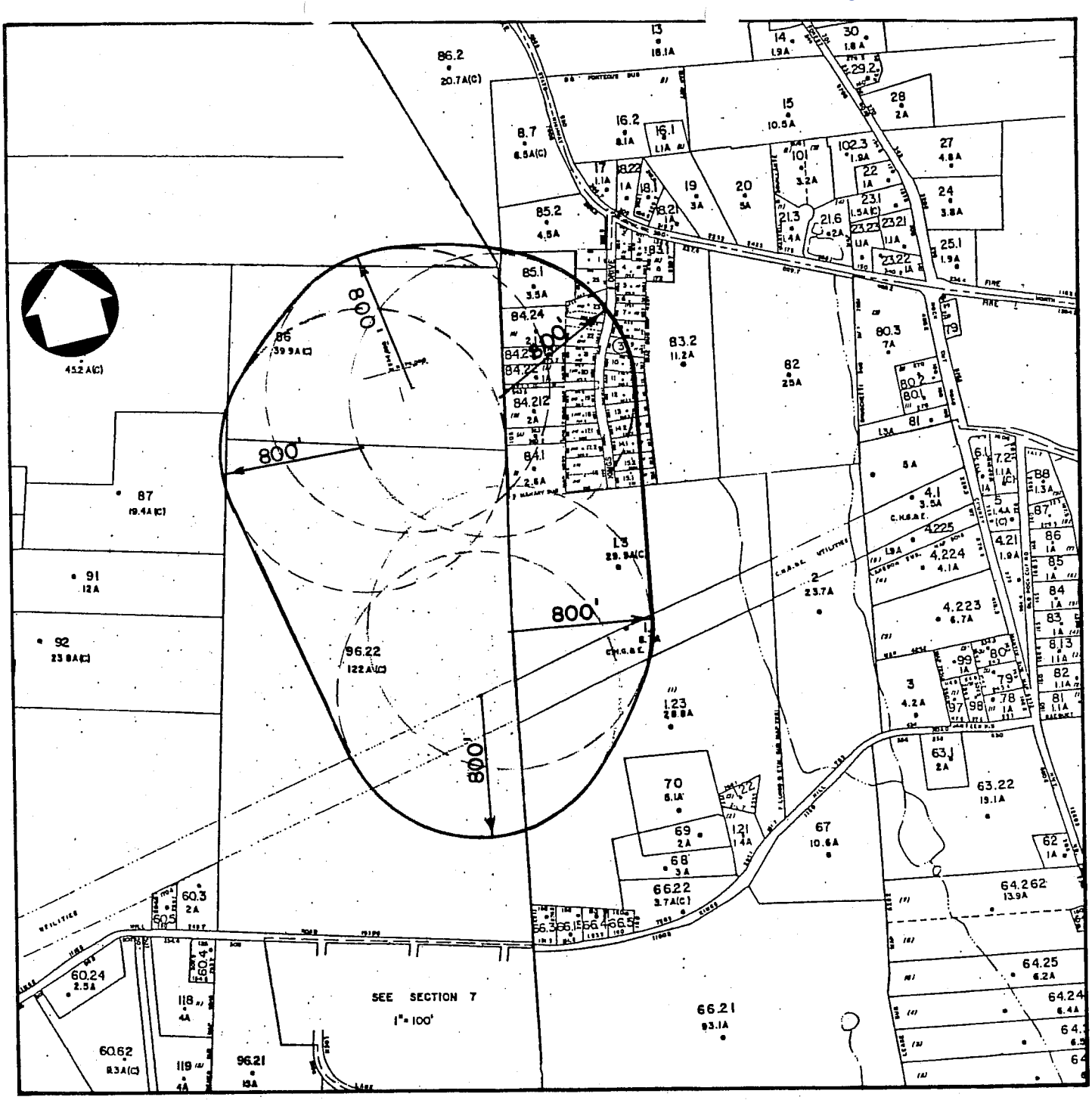
Blasting will be conducted to prevent injury to persons and damage to public or private properties outside the permit area. All blasting will be conducted under the direction of a certified blaster after preparation of a blasting plan. Persons responsible for blasting operations will be familiar with the blasting plan and site-specific performance standards. A certified blaster and at least one other person will be present at the firing of each blast.

Vibration Control Program

Pre-Blasting Surveys

Prior to the initation of blasting, the applicant will inform, in writing, all residents or owners of dwellings and other structures within 800 feet of the permit area (Figure 3) of proceedures to request a pre-blast survey. The request should be made in writing directly to the applicant or to the NYSDEC, which will notify the applicant. The applicant will promptly conduct a pre-blast survey of the dwelling or structure. If a structure is renovated, modified, or added to subsequent to a pre-blast survey, then, upon request, a survey of such additions or renovations shall be performed.

The survey will determine the condition of the dwelling or structure and document any pre-blasting damage and other physical conditions that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, cisterns, wells and other water systems, warrant special attention. However, the assessment of these structures may be limited to surface conditions and readily available data unless additional information is specifically requested.



SOURCE :
TOWN OF MONTGOMERY &
TOWN OF NEWBURGH TAX MAPS
APPROX. SCALE: 1" = 800'

FIGURE 3

PRE BLASTING SURVEY AREA

A written report of the survey will be promptly prepared and signed by the person who conducted the survey. The report may include recommendations of any special conditions or proposed adjustments to the blasting procedure which should be incorporated into the blasting plan to prevent damage. If the resident or structure owner or his representative accompanies the surveyor, the report shall contain the name of this person. Copies of the report shall be promptly provided to the person requesting the survey and to the NYSDEC. If the person requesting the survey disagrees with the results of the survey, he may submit in writing, to the applicant and the NYSDEC, a detailed description of the specific areas of disagreement.

Ground Vibration

In all blasting operations, the maximum ground vibration will not exceed 1.00 inches per second. The maximum ground vibration at the location of any dwelling or building outside the permit area will be established using scale-distance equations. The maximum weight of explosive to be detonated in any eight millisecond delay period will be determined using the following scale-distance equation:

$$W = (D/55)^2$$

Where:

W = the maximum weight of explosives, in pounds, that can be detonated within any eight millisecond period

D = the distance, in feet, from the blasting site to the nearest protected structure.

The use of this formula should result in a maximum peak particle velocity of less than 1.00 inch per second. Since the closest protected structure is at least 400 feet from the mining area, the maximum weight of explosive to be detonated per eight millisecond delay period

will be 53 pounds. Use of this scale-distance equation should eliminate the need for constant seismic monitoring. To insure that peak particle velocities are acceptable, seismic monitoring will be performed during each of the first four blasts, and thereafter on a quarterly basis. The results of this monitoring will be submitted to the NYSDEC.

A typical borehole pattern used at this site will range from 5 to 30 holes. This will provide for an average total weight of burden of 200 tons per blast. The blasting will be conducted with dynamite or ANFO (ammonium nitrate, fuel oil mixture). The holes will be loaded and a minimum of one foot of stemming will be provided. Blasts will be detonated using blasting caps and sequential board which provide an eight millisecond delay.

Control of Airblasts

Airblast shall be controlled so that it does not exceed the values as specified in Table 1, at any dwelling or building outside the permit area.

In all cases except those involving the use of C-weighted slow response devices, the measuring systems used will have a flat frequency response of at least 200 Hz at the upper end. The C-weighted shall be measured with a Type I sound level meter that meets the standard American National Standards Institute (ANSI) 91.4-1971 specifications.

If necessary to prevent damage, lower maximum allowable airblast levels will be specified for use in the vicinity of a specific blasting operation.

Blast Warnings

The following blast warning, all-clear signals, and site access control procedures will be used at this site.

At least 10 minutes before each blast, access to the area will be controlled by company personnel. Before each blast is detonated, the following types of audible warnings will be given. Five minutes prior to detonation, three long siren or horn blasts will be sounded. One minute prior to each detonation, three short siren or horn blasts will be

sounded. After each detonation, one long siren or air horn blast will be sounded for the all-clear signal.

Access to the blasting area will be controlled to prevent the presence of unauthorized personnel during blasting until the blaster has reasonably determined:

- That no unusual circumstances, such as imminent slides or undetonated charges exist
- That access to and travel in or through the blasting area can be safely resumed

Each person within the permit area and each person who resides or regularly works within a quarter mile of the permit area shall be notified of the meanings of these signals. This information will also be provided to all appropriate local government agencies.

2.3.4 Disposition of Materials

The material to be mined at this site consists of shale. No stockpiling of product beyond three months is planned for this permit area. All topsoil removed from the mining area will be temporarily stockpiled in the topsoil storage area. This material will be graded and seeded to prevent erosion. Refuse generated by mining at the site will be collected on a regular basis, removed from the permit area, and disposed of in an appropriate manner.

2.3.5 Access Road and Haulageways

No additional access roads will be constructed for this mine site. All excavated material will be transported from the site using the existing road located to the south of the permit area which runs directly to Kings Hill Road. The location of this road is shown on the Engineering Plans (Sheet 1 of 5). This access road consists of a well compacted shale surface. The road will be regraded, compacted and crowned to promote drainage, and left as an improvement to the property after mining is completed.

Temporary haulageways will be developed at the site on an as needed basis as the mining operation progresses through the phases.

TABLE 1

AIRBLAST LIMITATION

Lower Frequency Limit of Measuring System in Hz (+/-3 dB)	Maximum Level in dB
0.1 Hz or lower - flat response	134 peak
2 Hz or lower - flat response	133 peak
6 Hz or lower - flat response	129 peak
C-weighted, slow response	104 peak dBC

2.4 POLLUTION CONTROL

2.4.1 Dust and Noise Control

Dust will be controlled at this site by: 1) maintaining the roads in good condition (kept well compacted and sprayed with water during dry periods); 2) topsoil stockpiles will be protected from wind erosion by establishing temporary vegetation after the topsoil has been graded into place; and 3) dust from the mining area will be controlled by minimizing the area being excavated at any one time, and by reclaiming mined-out areas as soon as possible.

Noise from the proposed mine site will be controlled at all times. All equipment used at the site will be adequately muffled to prevent excessive noise. Noise will also be controlled by the use of screening. The natural screen of deciduous forest that surrounds the entire permit area will help to dampen noise generated by mining activity. Furthermore, nearby residences are situated at a lower elevation than the proposed mine and on the far side of the shale ridge. Excessive noise will also be controlled by regulating the hours of operation at the site. No mining will be done on Sundays or holidays, and all operations will be conducted between 7:00 AM and 4:30 PM weekdays, and 8:00 AM and 3:30 PM Saturdays.

2.4.2 Drainage and Water Control

The local surface water system will not be significantly affected by mining activity at this site. The excavation of rock from the existing mine will return the affected area to its approximate configuration prior to the original mining activity. Further mining activities are not expected to alter existing drainage patterns or affect runoff volumes. Mining and reclamation activities are not expected to significantly affect the local water balance.

The primary concern during active mining operations is the potential for increase in sediment in the surface water runoff. Several methods will be utilized to control surface water runoff at this site: 1) erosion will be controlled by concurrent reclamation of the mining areas; 2) by developing the site in phases, the amount of area to be disturbed at any one time will be

controlled, minimizing the potential for soil erosion; 3) completed areas will be graded and seeded as quickly as possible after mining is concluded. The quick establishment of vegetation on the bare ground surface will reduce runoff and minimize the potential for erosion; and 4) runoff will be diverted away from the active mine areas further minimizing the potential for erosion.

The primary drainage control measures to be used at the site will be a series of stormwater diversions and sediment barriers to be installed over the site in sequence with the mining phases. The diversions will route stormwater from stabilized areas away from the active mine areas, thereby reducing the contact of clean water with erosion-prone ground surfaces. Sediment barriers, located downslope from the active mine areas, will trap any sediment carried in the runoff from those areas prior to discharge of the runoff.

Diversions will remain in place until final reclamation. Sediment barriers will be relocated as mining progresses from one phase to the next. Regular cleaning of the sediment barriers will provide needed material for use as backfill in concurrent reclamation activities.

2.4.3 Screening

Several types of visual screening surround this proposed mine site and the site is not visible from either Kings Drive or Kings Hill Road. A natural screen will be maintained around part of the site by leaving a boundary of deciduous woodland around the the permit area. The trees act as a visual screen shielding the mine site from the public and also help to confine dust and reduce noise levels.

3.0 RECLAMATION PLAN

3.1 LAND-USE OBJECTIVE

After mining has been completed, the permit area will be reclaimed for a use consistent with residential development. Reclamation will include the mining area, topsoil storage area, the mine operation area, and the utility building. The final grades have been designed to blend into the existing ridge topography of the site after mining is completed. The site will be reclaimed to achieve a post-mining land-use of pasture land. This is consistent with the land use of the adjacent property and the RA-1 residential/agricultural zoning.

3.2 METHOD OF RECLAMATION

3.2.1 Disposition of Materials

After excavation is completed at the site, the permit area will be reclaimed. All refuse and personal property will be removed from the site area during reclamation and disposed of in an appropriate manner. All equipment currently located on the site and the utility building will also be removed.

As the existing mine face is excavated, a stepped cross-section will be created (Sheet 4 of 5). The final backfill configuration will be achieved by backfilling each one of these small benches to a maximum outslope of three horizontal to one vertical (18 degrees). The material used for this will come from the site itself. As rock is blasted from the highwall, small pieces of rubble (spoil) will be created. This material will be utilized to backfill the highwalls. Once the spoil has been graded, topsoil will be redistributed onto the site. The topsoil will be removed from the storage area and graded onto the disturbed area. The topsoil will consist of the original topsoil material, and additional material suitable for sustaining vegetation. It will be graded to a minimum depth of six inches.

3.2.2 Access Road and Haulageways

The access road to be used at this site will not be reclaimed when mining activity is concluded. The road will, however, be regraded and crowned and left as an improvement to the property after mining is completed. Access to the site will be controlled by a gate placed at the road entrance. When final development of the site begins, a permanent access road to the site will be constructed. However, the design of the permanent road is not within the scope of this Mined Land-Use Plan.

Haulageways will be reclaimed by grading and seeding in accordance with the Engineering Plans (Sheet 3 of 5).

3.2.3 Drainage

After mining has been completed, the affected area will be graded to the site's approximate original slopes which will allow natural runoff of surface water. A sediment barrier will remain in place around the perimeter for use as sediment control. This will provide sufficient protection from sedimentation until vegetation is established on the permit area. Once vegetation has been established and the potential for erosion has been mitigated, the barrier will be removed and the embedding trench wil be seeded.

3.2.4 Grading

All areas within the permit area will be graded into a stable backfill configuration. The proposed final grades to be established on the affected area are shown on the Engineering Plans (Sheet 3 of 5). A slope of three horizontal to one vertical (18 degrees) will be established around the mine face. Stockpile areas will be removed if necessary, or graded to achieve the approximate reclaimed contour of the property. This will help to re-establish the natural drainage of the site.

3.2.5 Revegetation

All areas which will be disturbed within the permit area will be revegetated. Two seed mixes are recommended for use on the disturbed areas and are shown on the Engineering Plans (Sheet 4 of 5).

Temporary vegetative cover will be used for the topsoil stockpile and any other area needing quick cover. Permanent cover will be used for final reclamation and provides an attractive and durable long-term cover for bare soil. Seeding schedules and mulching guidelines are also presented in the Engineering Plans (Sheet 4 of 5).

The following procedure should be used for seeding at this site:

- The seed bed should be prepared by discing, unless seeding follows regrading and topsoil redistribution closely enough that the soil provides an adequate sed bed without mechanical treatment.
- Major seeding can be accomplished with a hydroseeder, with smaller areas being seeded with a hand cyclone seeder. Grasses, lime, and fertilizers (at rates determined from appropriate analyses) should be applied at approximately the same time.

3.3 SCHEDULE OF RECLAMATION

Reclamation of an area (phase) will begin after active mining has ceased in that area (phase). Final reclamation, including grading and seeding, will be completed within six months of cessation of mining in Phase V. Once final reclamation activities have been completed, the NYSDEC will be notified, and an inspection will be scheduled to determine that the area was reclaimed in accordance with the Mined Land-Use Plan.

4.0 SELECTED REFERENCES

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APPENDIX 1
VOLUME AND AREA CALCULATIONS

PURPOSE: TO DETERMINE ① VOLUME OF MATERIAL AVAILABLE ② LIFE-OF-MINE ③ PHASE VOLUMES

A. DESIRED LEVEL OF ACTIVITY - FROM L. MEHL

1. 20 - 14 CY TRUCKS PER DAY ⇒ 280 CY/D
2. 280 CY/D X 6 DAYS X 50 WEEKS/YR ⇒ 84,000 CY/YR ↖ INTRUCK
3. FROM EXCAVATION HANDBOOK, H.K. CHURCH, MCGRAW-HILL 1981

   SHALE SWELL FACTOR = 1.5

   ∴ 84000 CY INTRUCK = 56,000 CY INPLACE

B. LIFE-OF-MINE

1. FROM SHEET 2, TOTAL CUT = 824,369 CY INPLACE

   $\frac{824,369 \text{ CY}}{56,000 \text{ CY/YR}}$ = 14.7 YEARS

   ∴ 15 YR LIFE-OF-MINE

C. PHASING:

1. 15 YEARS = 5 - 3 YR (TRIENNIAL) PERMIT PERIODS
2. $\frac{824,369 \text{ CY INPLACE}}{5 \text{ phase}}$ = 164,874 CY INPLACE PER PHASE
3. PHASE I MUST RECLAIM EXISTING MINE AREA. SEE SHEET 3

   175,777 CY (CUT) - 4,556 CY (FILL) =

   171,221 CY NET CUT INPLACE

VOLUME CALCULATION

DATE [illegible] SHEET NO. 2 OF 4
BY PC / Checked ECG

WEHRAN ENGINEERING
CONSULTING ENGINEERS

FINAL GRADING

SECTION CONTOUR	RDG. IN²	X AREA FT²/IN² 10,000	= AVERAGES	X DISTANCE SPACING	= VOLUME CF	VOLUME CY
680	0					
			178500	10	1785000	66,111
690	35.70	357,000				
			343,500	10	3436,000	127,259
700	33.02	330,200				
			303,350	10	3,033,500	112,352
710	27.65	276,500				
			246,750	10	2,467,500	91,389
720	21.70	217,000				
			208,500	10	2,085,000	77,222
730	20.00	200,000				
			197,500	10	1,975,000	73,148
740	19.50	195,000				
			189,500	10	1,895,000	70,185
750	18.40	184,000				
			177,750	10	1,777,500	65,833
760	17.15	171,500				
			152,750	10	1,527,500	56,574
770	13.40	134,000				
			117,000	10	1,170,000	43,333
780	10.00	100,000				
			73,250	10	732,500	27,130
790	4.65	46,500				
			30,300	10	303,000	11,222
800	1.41	14,100				
			7,050	10	70,500	2,611
810	0	0				
					TOTAL	824,369

VOLUME CALCULATION

DATE 6-15-07 SHEET NO. 2 OF 4
BY RPC ICG checked

WEHRAN ENGINEERING
CONSULTING ENGINEERS

PHASE I INC. RECLAM. EXIST. MINE

SECTION	RDG. IN^2	× AREA $\frac{FT^2}{IN^2}$	= AVERAGES	× DISTANCE SPACING	= VOLUME CF	VOLUME CY
690	0	0				
			71,850	10	718,500	26,611
700	14.37	143700				
			129,850	10	1,298,500	48,092
710	11.60	116,000				
			89,250	10	892,500	33,056
720	6.25	62,500				
			53,950	10	539,500	19,981
730	4.54	45,400				
			43,200	10	432,000	16000
740	4.10	41,000				
			37,200	10	372,000	13,778
750	3.34	33,400				
			28,250	10	282,500	10,463
760	2.31	23,100				
			16,300	10	163,000	6,037
770	.95	9,500				
			4,750	10	47,500	1,759
0	0	0				
				TOTAL CUT (CY) =		175,777
700	0	0				
			650	10	6,500	241
710	.13	1300				
			4400	10	44,000	1630
720	.75	7500				
			5500	10	55,000	2037
730	.35	3500				
			1750	10	17,500	648
740	0	0				
				TOTAL FILL (CY) =		4556

By ____ Date 5/13/4 | WEHRAN ENGINEERING | Job No. 79 34
Chkd. by ____ Date ____ | Engineers & Scientists | Sheet No. 4 of 4
Subject

PURPOSE: TO ESTABLISH 5 - 3yr Phases MAINTAINING PHASE I FOR OLD MINE RECLAMATION

CONTOUR	15yr	- PHASE I	REMAINDER		REMARKS
0					
690	66,111	0	66,111	—	
700	127,259	26,611	100,648	✓	
710	112,352	48,092	64,233		700
720	91,389	33,056	58,333	✓	
730	77,222	19,981	57,241	✓	733
740	73,148	16,000	57,148	✓	
750	70,185	13,778	56,407	✓	
760	65,833	10,463	55,370	✓	755
770	56,574	6,037	50537	✓	
780	43,333	1,759	41574	✓	
790	27,130	0	27130	✓	
800	11,222	0	11,222	✓	
810	2,611	0	2,611	✓	
TOTALS	824,369	175777	648,592		

648,592 ÷ 4 REMAINING PHASES ⇒ 162,148 / PHASE